NOTES ON AUSTRALIAN MOSQUITOES (DIPTERA, CULICIDAE).

PART III. THE GENUS AEDOMYIA THEOBALD.

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(Five Text-figures.)

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The genus *Aedomyia* includes a small number of rare, ornate species, well separated from other genera, and forming such a compact group that at one time African, Oriental, and Australian specimens were all included in one species. Edwards (1929), however, recognized four species, one South American, two African, and one common to the Oriental and Australian regions. In the present paper, a fifth species is recognized, the distribution of the genus being: *A. squamipennis* Arrib. (South America: British Guiana), *A. africana* Nev.-Lem. (Africa: Uganda, Nyasaland), *A. furfurea* End. (Africa: Kamerun, Dar-es-Salaam), *A. catasticta* Knab (Oriental: widespread; Australia: Northern Territory, Queensland), *A. venustipes* Sk. (Australia: New South Wales).

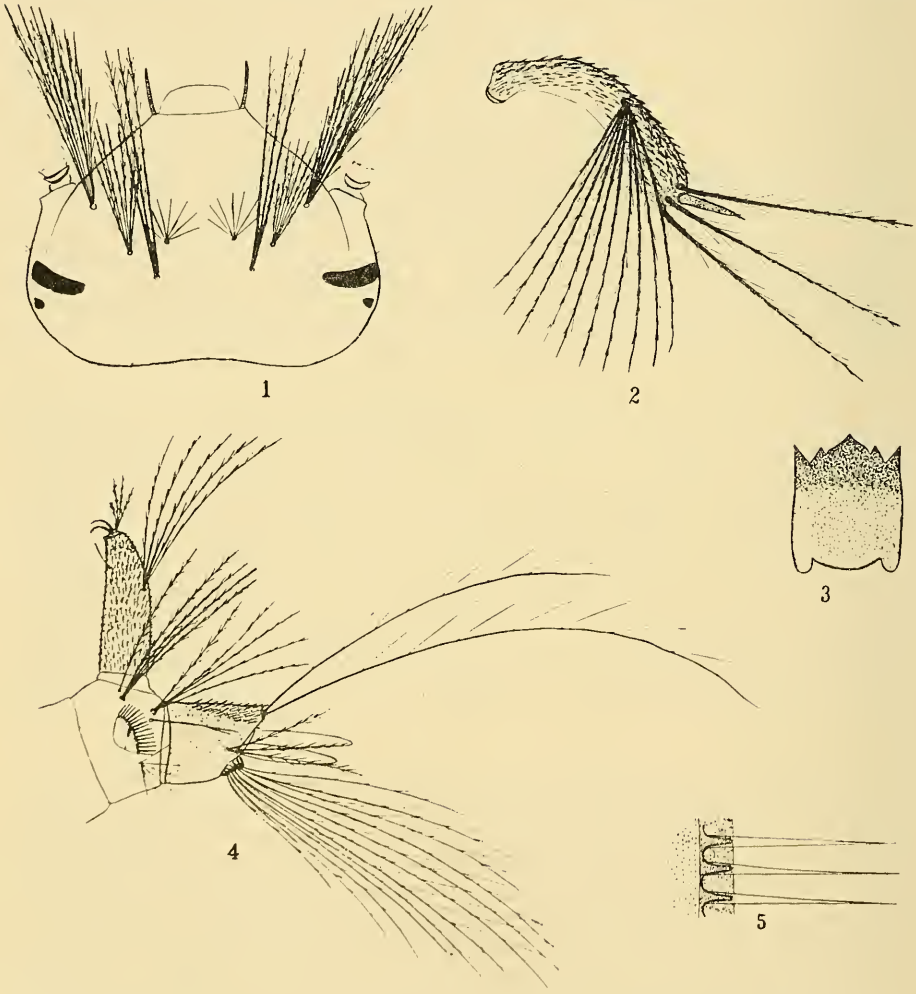
Aedomyia catasticta Knab.

Several adults were bred from larvae collected at Eidsvold, South Queensland, in April, 1924. They agree with previous descriptions (Taylor, 1916; Edwards, 1924; Barraud, 1927), and I have no doubt that they are identical with the true Oriental *A. catasticta*. The larvae were collected in an extensive swamp, and were extremely difficult to find, as they were almost transparent, pale green in colour, and clung tenaciously to the aquatic vegetation (*Nitella*). In captivity, they were observed to cling for prolonged periods to the smaller stems of the plants, from which they evidently obtained their oxygen, as they only came to the surface when dislodged by violent shaking or stirring. Thus, in habits, as in general morphology, these larvae resemble those of *Mansonia*, with which they are sometimes associated (Edwards, 1932). Predaceous insects were extremely abundant in the swamp, but seemed to have little or no effect on the *Aedomyia* larvae.

The general appearance of *Aedomyia* larvae is very striking and characteristic. They may be readily recognized with the naked eye by the extraordinary length of the thoracic and abdominal plumes, and by the enormously swollen antennae. In addition, the structure of the antennae, the very large, unusually formed, pendulous palpi, the absence of a pecten on the siphon, the peculiar structure of the comb on the eighth abdominal segment, and the presence of soft hairs dorsally on the anal saddle, are characters which, so far as I can determine, are found in no other larvae. The presence of a pair of hooks at the tip of the siphon is also rather characteristic, but similar hooks also appear in the genus *Taeniorhynchus* and in certain species of *Culex* (*C. basicinctus* Edw., and others). They are evidently an adaptation to a clinging habit, and have been

evolved independently in the different groups, for the bristles which are modified to form them are not the same in all species.

The larvae of *A. catasticta* from India have been described already by Barraud (1923), but the Queensland specimens do not agree entirely with his description and figures, so it would seem well to figure them and give a short description. Antennae with all three terminal bristles of approximately equal length, and all plumed; antennal plume consisting of ten plumose hairs all markedly longer than the shaft of the antenna. Post-antennal hairs arranged in an oblique row of three on each side, with a stellate tuft of seven or eight short hairs lying anterior and slightly medial to the inner of the three; outer tuft consisting of nine long, dark, heavily plumose hairs; middle tuft of six or seven



Text-figs. 1-5.—Full-grown larva of *A. catasticta*. 1. Head, 2. Antenna. 3. Labial plate. 4. Terminal segments. 5. Comb.

hairs, which are pale in colour, about half the length of the outer, and finely plumed; inner tuft composed of three stout, long, dark, heavily-plumed hairs. Siphon uniformly covered with short, soft hairs, which are not specially developed on any part; siphonal tuft composed of five or six plumed hairs; siphonal index approximately 3. The three more dorsal hair tufts on the eighth segment are plumed, as is the tuft of three hairs arising from the saddle of the anal segment.

The Indian larva described by Barraud differs chiefly in that the hairs composing the antennal tuft are shorter, being noticeably shorter than the shaft of the antenna; the apical hairs are, however, similar. One cannot tell from the description whether the post-antennal tufts are similar or not. The characters of the terminal segments appear to be similar, though this would not be apparent from a study of the drawings alone. There are certainly no recorded differences of sufficient magnitude to warrant separating the Australian form specifically from the Indian.

Aedomyia venustipes Skuse.

The type of *A. venustipes*, a female from Elizabeth Bay, Sydney, remains unique; it appears to be somewhat faded, but is in quite good condition. The late Dr. R. J. Tillyard collected some *Aedomyia* larvae in National Park, N.S.W., in February, 1917, which are presumably referable to this species, but I have been unable to rediscover it in this or any other locality.

Taylor (1914), after examining Skuse's types, considered that the Queensland species was the same as *A. venustipes*, and Knab's name, *catasticta*, has since then been regarded as a synonym. A comparison of the specimens from Eidsvold with Skuse's type, however, showed differences, which warrant specific distinction, particularly as they are in characters that are quite constant in the Eidsvold series. The two species may be separated as follows:

A. catasticta Knab.—Wings with four large, white costal spots, the third from the base oblong and extending half across the field of the wing. Abdomen brown; with a pair of round, subapical spots on tergites 3 to 6; with narrow lateral zones of yellow scales on the third and subsequent segments, expanding right across the apical edge of the eighth segment; and with a pair of oblique white patches on the basal half of each segment. Second, third, and fourth segments of hind tarsi black, with broad basal and narrow apical white rings (together forming a series of broad white rings on the legs); fifth segment white, with the apex narrowly black.

A. venustipes Skuse.—Wings with only three small, rounded costal spots. Abdomen brown, irregularly mottled with creamy scales, which do not form any definite pattern; there are no prominent yellow markings. Second segment of hind tarsus similar to the above, but with the pale rings narrower; third segment entirely pure white; fourth white, with a narrow brown apical ring; fifth black, with a narrow white basal ring.

The larvae from National Park differ from those of *A. catasticta* in several respects. The middle of the three post-antennal hair tufts consists of eight plumed hairs, which are as long and as prominent as the outer and inner. The inner hair tuft is composed of six or more, never less, plumed hairs, which are as long as the other tufts. The siphon is distinctly longer and more slender, the index being 3·5 or more. If these larvae are really those of *A. venustipes*, and it is reasonable to suspect that they are, their characters support the specific distinction from *A. catasticta*.

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